WORK AND SAFETY PLAN

Cooperative STS Gypsy Moth Project
For Indiana - 2015

This Work and Safety Plan covers the Gypsy Moth Slow The Spread (STS) cooperative treatment project which is represented by an Environmental Assessment document, Decision Notice & Finding of No Significant Impact (FONSI) document, Economic Analysis and Biological Evaluation for each project.

1.0 Personnel / Organization

This project is conducted by the Indiana Department of Natural Resources (Division of Entomology and Plant Pathology and the Division of Forestry) with cooperation from the USDA, Forest Service.

1.1 STATE ENTOMOLOGIST - Overall responsibility for the project under Indiana law with authority to initiate and stop the project at any time.

1.2 STATE FORESTER - Provides contract administration and cooperation between with the USDA - Forest Service.

1.3 OPERATIONS BASE COORDINATOR (mating disruption) - Coordinates activities of treatment site observers; maintains radio contact with contractor and treatment site observers; approves start of application to the treatment site and release of the pilot to go to the next treatment site and records all activities of the treatment site.

1.4 CENTRAL COMMUNICATIONS OFFICER – Receives and responds to phone calls from the 800 number; maintains conference call to treatment site observers; treatment site coordinators; load site observer; monitors weather radars; maintains call list of people requesting notification for health reasons; coordinates with Division of Communications for press releases.

1.5 CONTRACTOR - Responsible to know and meet all state and federal regulations regarding treatment material use and aerial application; comply with specifications of the contract; to provide a safety plan for spills and safety equipment for his employees; to provide security for aircraft and treatment materials, and to conduct pre application safety meeting and fly-over of the site.

1.6 FOREST HEALTH SPECIALIST (Div. Forestry) - Provides supervision of the project; prepares and reviews the environmental assessment; assists with public meetings; prepares and assists with treatment and contract; assists with biological evaluation; and coordinates and administers work and safety plan.

1.7 LOAD SITE OBSERVER - Observes and records mixing and loading of treatment material; performs check of treatment equipment on aircraft for compliance with contract specifications; records amount of treatment material loaded and remaining after application; views digital application files for accuracy of application & advise applicator of any errors or problems; records other data on aircraft and pilot conducting each application; and coordinates project communications among treatment site observers, treatment site coordinators and other staff involved in the treatment.

1.8 TREATMENT SITE COORDINATOR - Conducts activities of treatment site observer; coordinates activities of treatment site observers; maintains radio contact with contractor and observers; approves start of application to the treatment site and release of the pilot to go to the next treatment site and records all activities of the treatment site.

1.9 TREATMENT SITE OBSERVER - Monitors aerial application of treatment material from the ground; observes aircraft for proper operation of treatment equipment; documents and reports defective nozzle operation; sets and retrieves spray deposit cards(if used) or monitors vehicles and other objects for spray deposition; records weather information (temperature, humidity and wind speed) and foliage expansion; records start and completion time of application; maintains radio contact with applicator; and communicates to people within treatment site.

2.0 NURSERY INSPECTORS AND COMPLIANCE OFFICERS (Div. Entomology) - Provides supervision of the project in conjunction with the Forest Health Specialist; conducts and assists with public meetings and public notification; assists and conducts biological evaluation; prepares treatment boundaries; provides GIS support for the project; conducts pre treatment assessments for boundaries and aerial safety concerns; assists with work and safety plan; conducts treatments serving as treatment site observer and/or treatment site coordinator; prepares and reviews environmental assessment; monitors treatment progress; answers phone calls and monitors weather radar.

The State Entomologist is responsible for administering the treatment project and this work and safety plan. The use of ‘state agent’ in this plan refers to the personnel listed above.

2.0 Treatment Areas

The Indiana Department of Natural Resources (IDNR), Division of Entomology & Plant Pathology and Division of Forestry, proposes a cooperative project with the United States Department of Agriculture (USDA), Forest Service (USFS) to treat the gypsy moth populations at nine sites in three counties that cover an estimated 34,080 acres (Table 1 below and maps in Appendix B). The preferred alternative for the cooperative project is Alternative 4: Btk and/or mating disruption.

Table 1. Number of Treatment Sites and Acres by County and Treatment Method for 2015.

COUNTY	TREATMENT SITES By Treatment Method		TREATMENT ACRES By Treatment Method	
	Mating Disruption	Btk Aerial	Mating Disruption	Btk Aerial
Lake	0	2	0	781
Porter	2	2	7,255	137
Lake/Porter	1	0	6,748	0
St. Joseph	1	1	15,020	4,139
Proposed Cooperative Project by Treatment	4	5	29,023	5,057
Total Cooperative Project	9		34,080	

2.1 Description of the Proposed Treatment Sites

Lake County: This county is approximately 317,990 acres and 781 acres are in the proposed treatment sites. Thus a small portion of the county is proposed for treatment. Within the treatment sites, the tree canopy is estimated to be 20% of the individual treatment sites and is the target for treatment.

Gary 1: The proposed treatment site contains 426 acres. The site is composed of trees associated with urban residences and woodlots. White oak, red oak, bur oak, maple, cherry and other hardwoods and shrubs are present. Houses and businesses occur within the site. Lake George occurs within the southern and eastern boundaries of the site. Lakeview Park occurs within the northeast portion of site. The Oak Savannah Trail runs through the site north of 10th street and south of 8th street. The Hobart Community pool is located in the center of the site. St. Mary's Medical Center occurs just outside the southeast boundary of the site. There is a preschool in the center of the site on the east side of Wisconsin street just north of 10th street. There are high power lines outside of the site on the western boundary. This site was detected in 2009 and delimited in 2010 to 2012. The site was part of a 2010 and 2012 mating disruption treatment.

Egg masses were detected in this site in 2014. Survey indicates a low gypsy moth population, and Btk is proposed for this site.

Gary 2: The proposed treatment site contains 355 acres. The site is composed of trees associated with urban residences and woodlots. White oak, bur oak, maple and other hardwoods and shrubs are present. Houses and businesses occur within the site. A portion of Lake George occurs within the southern and eastern part of the site. Cressmoor Prairie Nature Preserve occurs just outside the northeastern boundary of the site. Mundell Park and other parks occur within the site. Power lines occur outside the west boundary of the site running north and south. This site was detected in 2009 and delimited in 2010 to 2012. The site was part of a 2010 and 2012 mating disruption treatment. Egg masses were detected in this site in 2014. Survey indicates a low gypsy moth population, and Btk is proposed for this site.

Porter County: This county is approximately 267,639 acres and 7,392 acres are in the proposed treatment sites. Thus a small portion of the county is proposed for treatment. Within the treatment sites, the tree canopy is estimated to be 20-65% of the individual treatment sites and is the target for treatment.

Palmer 1 and 2 : The proposed treatment sites contain 137 acres. The sites are composed of trees associated with rural residences and woodlots. White oak, maple, cherry, hackberry, mulberry, walnut and other hardwoods and shrubs are present. Houses occur within the sites. No water sources occur within the sites. The sites were detected in 2014 and have had no prior treatment. Egg masses were detected in this site in 2015. Survey indicates a low gypsy moth population, and Btk is proposed for these sites.

Valparaiso 12: The proposed treatment site contains 3,096 acres. The site is composed of trees associated with urban residences and woodlots. Oak, maple honeylocust and other hardwoods and shrubs are present. Houses and businesses occur within the site. Silver Lake, Eliza Lake and several other small lakes occur within the site. Foundation Meadow Park, Ogden Park, Tower Park, Bicentennial Park, David Butterfield Family Pavillion and Forest Park Golf Course occur within the site. Ivy Tech Community College, Valparaiso High School, two preschools and other schools occur within the site. A water tower occurs in the northwest portion of the site and high power lines occur in the northern portion of the site running east and west. This site was detected in 2010 and delimited in 2011 and 2014. The site was part of a mating disruption treatment in 2011 and part of a mating disruption and Btk treatment in 2014. No egg masses were detected in this site in 2014. Survey indicates a very low gypsy moth population, and mating disruption is proposed for this site.

Chesterton 1: The proposed treatment site contains 4,159 acres. The site is composed of trees associated with urban and rural residences and woodlots. White oak, red oak, hackberry, wild cherry, mulberry, maple and other hardwoods and shrubs are present. Houses and businesses occur within the site. Sand Creek Country Club (with ponds) occurs in the southwest portion of the site. Chubb Lake occurs in the western portion of

the site. The Little Calumet River, several creeks and associated wetlands occur within the site. The Little Calumet Wetland Restoration Area occurs on the eastern boundary of the site. Two schools occur within the site. Two cell towers occur just northwest of the site. This site was detected in 2014 and has had no prior treatment. No egg masses were detected in this site in 2014. Survey indicates a very low gypsy moth population, and mating disruption is proposed for this site.

Lake/Porter Counties: Lake and Porter Counties are approximately 585,629 acres. 6,748 acres are in the proposed treatment site. Thus a small portion of the counties is proposed for treatment. Within the treatment sites, the tree canopy is estimated to be 70% of the individual treatment sites and is the target for treatment.

Portage 1: The proposed treatment site contains 6,748 acres. The site is composed of trees associated with urban and rural woodlots. Oak, cottonwood, maple, willow and other hardwoods and shrubs are present. Houses and businesses occur within the site. Long Lake and several other lakes occur within the site. Indiana Dunes National Lakeshore occurs within the site. The Portage-Burns waterway ditch occurs throughout the south portion of the site. Calumet Prairie Nature Preserve occurs in the southwestern portion of the site. This site was detected in 2014 and has had no prior treatment. No egg masses were detected in this site in 2014. Survey indicates a very low gypsy moth population, and mating disruption is proposed for this site.

St. Joseph County: This county is approximately 293,000 acres and 19,159 acres are in the proposed treatment sites. Thus a small portion of the county is proposed for treatment. Within the treatment sites, the tree canopy is estimated to be 65% of the individual treatment sites and is the target for treatment.

Potato Creek 1: The proposed treatment site contains 4,139 acres. The site is composed of trees associated with urban woodlots. Red oak, white oak, maple, ash, elm, walnut, white pine, redbud, blue spruce and other hardwoods and shrubs are present. Houses and businesses occur within the site. Worster Lake and Potato Creek occur in the southwestern portion of the site. Several small lakes, ponds, wetlands areas and a ditch occur within the site. Potato Creek State Park occurs in the southwestern portion of the site, which includes the Swamp Rose Nature Preserve. Potato Creek State Park Campground occurs in the southwestern portion of the site. Beaver Ridge Family Campground occurs just south of the site. Several organic and nonorganic beekeepers, and animal farms occur within and just outside the site boundaries. A school occurs about 0.8 miles north of the site. Two cell towers and high voltage lines occur just outside the site. This site was detected in 2014 and has had no prior treatment. Egg masses were detected in this site in 2014. Survey indicates a low gypsy moth population, and Btk is proposed for this site.

Potato Creek 2: The proposed treatment site contains 15,020 acres. The site is composed of tress associated with urban woodlots. Red oak, white oak, maple, ash, elm,

walnut, white pine, redbud, blue spruce and other hardwoods and shrubs are present. Houses and businesses occur within the site. Worster Lake, Potato Creek and Kartoffel Creek occur within the site. Several ditches, ponds and wetlands areas occur within the site. The site contains Potato Creek State Park and the Swamp Rose Nature Preserve within the park. Several organic and nonorganic beekeepers, and animal farms occur within and just outside the site boundaries. There is a school approximately 0.8 mile north of the site. Two churches occur within the site. Two cell towers occur in the northern portion of the site. An electrical substation occurs just south of the site. This site was detected in 2014 and has had no prior treatment. No egg masses were detected in 2014. Survey indicates a very low gypsy moth population, and mating disruption is proposed for this site.

3.0 Pre-treatment Operation

3.1 Biological Monitoring

A. Egg masses are monitored near or in the treatment site(s) to determine the date of egg hatch. This is used to aid in determining the time of first application for Btk and to aid in determining the time of male moth emergence for the application of mating disruption.
B. Larvae observed in the sites will have their stage of development determined. When approximately 25-50% of the larvae are second instar, the first application of Btk is applied. The larval development will also be used to determine when pupation could occur, which will aid in determining the application time for mating disruption. For the Btk treatment sites, foliage expansion will be monitored so that an adequate target is available for the deposition of the Btk. Oak foliage will be used to guide foliage expansion. When expansion is near 50%, the first application will be applied. Other tree species in the project site will be monitored, also. Species such as sugar maple will also be used to determine the first application, especially if they are the major component of the overstory.
C. The first application of Btk will be from late April through late May depending on weather. The earliest recorded male moth catch date and the above information will be used to determine the time for application of the mating disruption, which could be from mid June through early July.

3.2 Calibration and Characterization

A. Treatment equipment cleaned prior to application.
B. For Btk, clean nozzles installed and in line screen, clean and no finer than 30 mesh.
C. Aircraft calibrated and characterized prior to application.
D. Tanks, hoses and pump on treatment aircraft checked for leaks before the treatment material is loaded.
E. The swath width used during application is determined in consultation with the state entomologist and USDA Forest Service using the swath width defined from characterization.

F. Contractor will upload the most recent and correct GIS files of the treatment sites into the aircraft navigation system and verify that the navigation system will accurately guide the treatment applications.
G. An aircraft safety check at time of calibration and characterization and at the time of loading for each application.
H. Testing and designation of radio frequencies for ground to air communication conducted at pretreatment meetings and at the time of loading for the application.

3.3 Pre-treatment Training

A. Contractor:
   1. The contractor will view the treatment site from the ground and/or air prior to the application with an agent of the State Entomologist to familiarize the contractor with the boundaries, hazards and other safety concerns.
   2. The contractor will provide a spill plan.
   3. Review the following information provided by the contractor to the State Entomologist:
      a) Nozzle type/number and number of nozzle per aircraft for Btk
      b) Swath width
      c) Gallon per minute for Btk
      d) PSI for Btk
      e) Height about project area
      f) Air speed during application
      g) Pilot name and license # (FAA & Pesticide), years of experience
      h) Aircraft type/model/number (FAA)
      i) Treatment materials applied through treatment equipment just prior to this project for Btk
B. Observers:
   1. Familiarize observers with treatment site boundaries, hazards, school bus schedules, hospitals with helipads, and other safety concerns.
   2. Instruct observers in placement and retrieval of spray deposit cards for Btk (if used).
   3. Instruct observers in radio and all phone operation and communication procedures.
   4. Instruct observers in the use of monitoring procedures and equipment - temperature/humidity meter, wind meter and foliage expansion measure.
   5. Instruct observers on procedures for an emergency.

4.0 Treatment Operations

4.1 Communications

A. All project personnel
   1. A mandatory safety and coordination meeting will be held at the base of operations before applications begin. If the base of operations move, a meeting

will be held

B. Aircraft pilot to treatment site
   1. The contractor provides radios for DNR employees to communicate with the pilot. Or, the contractor installs the DNR radio frequency or radio into the aircraft. Or, the contractor meets communication requirements of the USDA Forest Service for the application of mating disruption.
   2. Radio communication is established at each treatment site between the pilot and treatment site observer or treatment site observer/coordinator.
   3. The pilot and/or load observer will notify the treatment site coordinator after loading is complete before heading to treatment site for Btk treatments. For mating disruption treatments the pilot and/or operations base coordinator will notify the treatment site coordinator when the loading is complete and the pilot is headed to the treatment site.
   4. Radio communication is used:
      a) to give contractor clearance to start application at the treatment site;
      b) to communicate malfunctioning treatment equipment;
      c) to communicate start and stop points for flight lines;
      d) to communicate any skips or misses;
      e) to communicate any hazards, safety concerns or other problems within the treatment site;
      f) to communicate potential hazards from other aircraft entering the treatment site and locations of hospitals with emergency helicopter service;
      g) to stop application for safety and weather condition reasons;
      h) and to release pilot and aircraft to move to the next site.

C. Between treatment sites
   1. Radios and cellular phones will be used to notify each treatment site of the application progress, when the aircraft is moving to the next site, when the application is completed, any safety concerns and emergency situations.
   2. Cellular phones will be used to communicate to local emergency service agencies.

D. Central communications officer
   1. One person will be assigned to take phone calls at a central phone number for the project and to keep in communication with ground observers.

4.2 Treatment Schedule and Constraints

A. Refer to Section 3.1 - Biological Monitoring for the time of application.
B. Second application (if applicable as per project preferred alternative for the site) of Btk is made no sooner than four days after the first application.
C. Start date will be determined by the State Entomologist and the contractor given a minimum of 48 hours notice before first application.
D. First application of Btk will be made when 25-50% of the gypsy moth larva are 2nd instar size. This is estimated to be between late April and late May.
E. For mating disruption, application will be made 1-2 weeks prior to historical date of first male moth catch from detection surveys. This is estimated to be between mid

June and early July.

F. Applications will be made under the supervision and authority of the State Entomologist or his agent in coordination with the USDA Forest Service and USDA APHIS.
G. The State Entomologist or treatment site coordinator (for Btk treatments) or operations base coordinator or treatment site coordinator (for mating disruption treatments) must be present at the time of each application and will give the order to stop, start or alter application.
H. Application will start after dawn, as stated by the National Weather Service, and continue until completed or when weather conditions and safety concerns are not acceptable for the safe operation of the treatment. Application would restart on the same day should weather conditions and safety concerns return to acceptable levels for a safe operation.
I. Application will stop when wind speeds exceed 10 mph or cause the treatment to drift off the project location.
J. Application of Btk will be suspended when school buses are in the site and when children are outside on school grounds. The State Entomologist or his agent will contact the local school district for bus schedules at the project site and inform the vendor when treatment will stop.
K. Treatment of Btk will be done when weather reports indicate there will be no rain for a minimum of 24 hours, preferably 48 hours. However, depending on weather patterns and development of larva and foliage, a 6-hour minimum period of no rain will be used as decided by the State Entomologist or his agent to allow application.
L. Low relative humidity below 50% and high temperature above 80 F may stop application. Treatment may continue at temperatures above 80 F if there are no thermal inversions.
M. Treatment of mating disruption will be done when weather reports indicate there will be no threat of rain within one hour after treatment.

4.3 Pilot Briefing

A. Review Section 3.3 A. – Pre-treatment Training with Contractor
B. Update pilot on any changes in treatment site boundaries, hazards, or other safety concerns.
C. Insure navigation system and treatment file is properly linked.
D. Check treatment file in the navigation system to insure the file is the most recent version and contains the correct treatment boundaries should there be any changes in boundaries to mitigate issues regarding the treatment sites.
E. Review treatment application at end of application or end of day.

4.4 Mixing and Loading

A. Btk will be applied undiluted, as per the label or recommendations of the manufacturer. The rate is between 24 to 38 BIU/acre.

B. The mating disruption will be applied per the label, the recommendations of the manufacturer or the recommendation of the USDA Forest Service. The rate is 15 or 6

grams AI/acre unless amended by manufacturer or USDA Forest Service.
C. The treatment material will be mixed according to the label directions.
D. Mixing and loading shall occur under the supervision of the State Entomologist or his agent. The State Entomologist and the contractor will mutually agree upon the site(s) for loading and mixing. The site(s) shall be located in proximity to the treatment site(s).
E. Excess treatment material from each application shall be disposed of according to the label and all state and federal safety guidelines by the vendor.
F. The contractor provides equipment for mixing, loading.
G. Contractor is responsible to clean up treatment material and fuel spills.
H. Contractor provides a safety plan for spills.
I. Contractor maintains all required records as specified in the project contract.
J. Contractor provides safety clothes and equipment for the contractor's employees.
K. Contractor provides the following in written form for each application:
    1. Nozzle type/number and number of nozzle per aircraft.
    2. Swath width.
    3. Gallon per minute.
    4. PSI.
    5. Height about project area.
    6. Air speed during application.
    7. Pilot name and license # (FAA & Pesticide), years of experience.
    8. Aircraft type/model/number (FAA).
    9. Treatment materials applied through sprayer just prior to this project.
L. The load site observer will record information about mixing and loading
    1. amount of treatment material loaded,
    2. amount of treatment material remaining,
    3. amount and type of sticker loaded.
M. The load site observer will inspect the treatment equipment for:
    1. treatment equipment clean,
    2. new and clean nozzles installed,
    3. in line screen, clean and no finer that 30 mesh,
    4. tanks, hoses and pump on treatment aircraft checked for leaks,
    5. treatment equipment operating properly.
N. The load site observer tests radio communication between the ground and air.

4.5 Application Monitoring

A. Treatment site observer will record and monitor the following during application:
    1. temperature
    2. relative humidity
    3. wind speed.
B. Treatment site observer will set and recover spray deposit cards, if utilized for a treatment site.

C. Treatment site observer will observe treatment emitting from aircraft. The pilot will be notified and treatment will be halted if the pattern and coverage are seriously altered.

D. Treatment site observer will observe flight path, start/stop points for application, note any problems or deviations and advise pilot, treatment site coordinator and load site observer of the problems or deviations.
E. For Btk treatments, treatment site observers will monitor for drones and other aerial safety hazards and notify the pilot and central communications officer immediately if hazards enter the treatment area. For mating disruption treatments, the treatment site observers will notify the pilot and base operations coordinator.
F. Treatment site coordinator will approve start of application to the site and release of the pilot to go to the next site.
G. Treatment site observers will visually verify that the proper boundaries are used (See Section 3.3 B. - Pre-treatment Training for Observers).
H. Load site observer will receive digital files that record treatment application from the applicator (see Section 1.8 – Load site observer) at the end of each treatment day or when a treatment is completed. Load site observer will view digital files for accuracy of application & advise applicator of any errors or problems.
I. After applications are conducted the State Entomologist or Central Communications Officer will report acreages completed and other required information to the National Pest Suppression Tracking System.

5.0 Public Notification

5.1 Residences in the treatment sites will be notified of the decision to proceed with the project approximately two weeks before the planned treatment by direct mail. The residences and the public will also be notified approximately two weeks before the planned treatment by using news releases via local newspapers and radio/TV stations.

5.2 The media will be notified at least two days before the planned date of treatment and asked to provide information on the treatment and the treatment date to the residences in the treatment sites and the public. Public media will be utilized to the best means possible to notify the public of changes in the planned treatment date when adverse weather conditions arise and the planned treatment date has to be changed.

5.3 Local emergency agencies (including hospitals with helipad transport services) and other private helipads and airports will be notified of the planned treatment date and time, and given information of contact persons to direct questions.

Offices of county/municipal officials (extension agents, mayor, etc.) will be notified of the planned treatment date and time prior to treatment. Contact persons and other information will be provided as needed

5.5 Notification will contain information pertinent to the specific treatment, treatment schedule, and precautions to be taken.

6.0 Security

6.1 Treatment Product

A. The State will require a certificate of analysis from the manufacturer prior to application.
B. The manufacturer will provide a chain of custody document to the contractor upon delivery of the product.
C. The manufacturer provides factory seals at the point of origin.
D. The contractor will retain the chain of custody document and provide it to the State agent prior to application.
E. The contractor must notify the State agent when the product has arrived and is in his/her custody.
F. Upon delivery the contractor must provide a storage facility for the product that is locked and secured.
G. A State agent will inspect the product within 24 hours of notification that the contractor has received the product.
H. Upon notification that the contractor has received the product, the State agent shall notify responsible security officials (police, sheriff and/or conservation officers) where the product is located and request the location be monitored periodically until the treatment project has been officially completed.

6.2 Aircraft Security

A. The aircraft will be secured in a hanger or disabled when not in use.
B. The spray equipment – hoppers, tanks, pumps, hoses and mixing equipment – will be secured in a hanger or sealed at the end of each workday.
C. The airport facility will be monitored periodically until the treatment project has been officially completed.

6.3 Pilot

A. The pilot must have FAA approval for restricted areas.

6.4 Airport Security

A. Access to the airport loading and storage areas will be restricted.
B. Identification will be required for access to airport loading and storage areas, and other operation sites.

7.0 Safety

7.1 Handling of Treatment Material

A. Contractor will provide protective clothing for his employees.

7.2 Accidental Spill

A. The contractor will provide a spill plan and safety equipment for the loading/mixing of the treatment material, for fueling the aircraft and for spills that occur during the treatment.
B. This spill plan will be followed in case of an accidental spill.
C. The contractor is responsible to clean up any treatment spills.
D. In the event a spill does occur or pilot has to dump the treatment material, the following will be notified:

- Safety Officer of the DNR: (Richard Edwards) 317-232-4145
- State Chemist Office: 765-494-1492
- State Police: 911 or site specific emergency numbers
- IN Dept. of Environmental Management Spill Line: 888-233-7745
- Local authorities: police, fire department, hospitals (site specific emergency numbers)
- CHEMTREC (Chemical Transportation Emergency Center): 800-424-9300
- National Response Center (if spill occurs on a highway): 800-424-8802
- USDA, Forest Service, Northeastern Area:
  (Marc Roberts) 651-470-3153/651-649-5268 or
  (Mike Connor) 651-247-8076/651-649-5180 or if unavailable call
  (Dan Zimmerman) 610-742-7860

(SEE: PESTICIDE SPILL CALLING SHEET, PAGE 17)

7.3 National Pollutant Discharge Elimination System Incident Reporting Requirements

<u>Adverse Incidents to be Reported to the Indiana Dept. of Environmental Management (IDEM)</u>

All persons covered by the Indiana General Permit for Pesticide Applications (Permit ING870000) must monitor for, identify, and report adverse incidents. If a person covered by this general permit observes or are otherwise made aware of an adverse incident that may have resulted from a discharge from the pesticide application, the person must notify IDEM by telephone at (888) 233-7745.

A. Immediately for incidents which pose a significant danger to human health or the environment,

B. As soon as possible but within two (2) hours of discovery for any adverse incidents resulting in death or acute injury or illness to animals or humans (see 327 IAC 2-6.1), and

C. Within 24 hours of the person becoming aware of the adverse incident for any other adverse incidents not listed above.

Such adverse incident reports to IDEM must include the following information:

- The caller's name and telephone number;
- Operator name and mailing address;
- If covered under a notice of intent, the NPDES tracking number;
- The name and telephone number of a contact person, if different than the person providing the 24-hour notice;

• How and when the person became aware of the adverse incident;
• Description of the location of the adverse incident;

• Description of the adverse incident identified and the EPA pesticide registration number for each product the person applied in the area of the adverse incident; and
• Description of any steps the person has taken or will take to correct, repair, remedy, clean up, or otherwise address any adverse effects.

Written Reports of Adverse Incidents to IDEM

Within 5 days of reporting an adverse incident, the person covered by the pesticide general permit must provide a written report of the adverse incident to the department which includes the following information:

A. Information required to be provided above;
B. Date and time the person notified IDEM of the adverse incident, who the person spoke with, and any instructions the person received from IDEM;
C. Location of incident, including the names of any waters affected and appearance of those waters (sheen, color, clarity, etc);
D. A description of the circumstances of the adverse incident including species affected, estimated number of individual and approximate size of dead or distressed organisms;
E. Magnitude and scope of the affected area (e.g. aquatic square area or total stream distance affected
F. Pesticide application rate, intended use site (e.g., banks, above, or direct to water), method of application, and name of pesticide product, description of pesticide ingredients, and EPA registration number;
G. Description of the habitat and the circumstances under which the adverse incident occurred (including any available ambient water data for pesticides applied:
H. If laboratory tests were performed, indicate what test(s) were performed, and when, and provide a summary of the test results within 5 days after they become available;
I. If applicable, explain why the person believes the adverse incident could not have been caused by exposure to the pesticide;
J. Actions to be taken to prevent recurrence of adverse incidents; and
K. Signed and dated in accordance with 327 IAC 5-2-22.

The person must report adverse incidents even for those instances when the pesticide labeling states that adverse effects may occur.

Adverse Incident Reporting For Federally listed Threatened or Endangered Species

If a person becomes aware of an adverse incident to a federally listed threatened or endangered species or its federally designated critical habitat, that may have resulted from a discharge from the pesticide application, the person must immediately notify the National Marine Fisheries Service Northeast Regional Office (NMFS) at **978-281-9300** in the case of an anadromous or marine species, or the U.S. Fish and Wildlife Service

(FWS) Indianapolis Law Enforcement Office at **317-346-7014** in the case of a terrestrial or freshwater species.

This notification must be made by telephone immediately upon becoming aware of the adverse incident and must include the following information:

A. The caller's name and telephone number;
B. Operator name and mailing address;
C. The name of the affected species;
D. How and when the person became aware of the adverse incident;
E. Description of the location of the adverse incident;
F. Description of the adverse incident, including the EPA pesticide registration number for each product the person applied in the area of the adverse incident; and
G. Description of any steps the person has taken or will take to alleviate the adverse impact to the species.

Adverse Incident Reporting for State-Listed Rare, Threatened or Endangered Species

If a person becomes aware of an adverse incident to a state-listed rare, threatened or endangered species or its critical habitat that may have resulted from a discharge from the pesticide application, the person must immediately notify the Indiana Department of Natural Resources at **317-232-4200**. This notification must be made by telephone immediately upon becoming aware of the adverse incident and must include the information required in the previous section.

7.4 Safety Training

Safety training will be incorporated into the pre treatment training for treatment site and load site observers and other personnel. The Work and Safety Plan will be reviewed at the time of application. Individuals will review emergency procedures, phone numbers, the communication procedure, the location of emergency equipment, and the monitoring procedure.

7.5 Aviation Accident

In the event of an accident, the treatment site observer or other project personnel will notify the State Police, 911 services if available in project area, county/municipal police, fire department, hospital and EMS for emergency situations. Also notified will be those listed under accidental spill. Project personnel will assist in the emergency situation as needed. DO NOT DELAY NOTIFICATION TO EMERGENCY SERVICES. **(SEE: OVERDUE AIRCRAFT, CRASHED AIRCRAFT OFF AIRPORT, CRASHED AIRCRAFT AT AIRPORT CALL LISTS AND AIRCRAFT ACCIDENT CHECKLIST AND OTHER INSTRUCTIONS, PAGES 20-25)**

7.6 Personal/Vehicular Incident

In the event of a personal or vehicular incident, the treatment site observer or other project personnel will notify the State Police, 911 services if available in the project area, county/municipal police, fire department, hospital and EMS for emergency situations. Project personnel will assist in the emergency situation as needed. A report of the incident should be made using Indiana State Form 40141, "Report of Personal/Vehicular Incident".
DO NOT DELAY NOTIFICATION TO EMERGENCY SERVICES.
(SEE: REPORT OF PERSONAL/VEHICULAR INCIDENT, PAGES 18-19)

7.7 Project Aviation Safety Plan

This Indiana Work & Safety Plan is used in conjuction with the USDA, Forest Service Aviation Management Plan 2015 for the Mating Disruption Treatment Project.

All pesticide incidents and accident situations will be reported per instructions of the Forest Service Handbook (FSH) 2109.14, Chapter 70. Specific instructions for filing Report FS-2100-D, Pesticide Accident and Incident Report, are in section 71.3 of the FSH handbook.

PESTICIDE SPILL CALLING SHEET

In the event of a pesticide spill notify the following personnel:

1.	Indiana DNR Safety Officer	**Richard Edwards** **317-232-4145**
2.	Call State Chemist Office	**765-494-1492**
3.	Call State Police	**See Site Specific Emergency Numbers**
4.	Call Department of Environmental Management Spill Line	**888-233-7745**
5.	Notify Local Authorities (Police, Fire, Hospital) if needed	**See Site Specific Emergency Numbers**
6.	Notify CHEMTREC (Chemical Transportation Emergency Center)	**800-424-9300**
7.	Notify National Response Center (If spill occurs on highway)	**800-424-8802**
8.	Notify U S Forest Service	**Marc Roberts** **(651) 470-3153 / (651) 649-5268**
	Or	**Mike Connor** **(651) 247-8076 / (651) 649-5180**

REPORT OF PERSONAL / VEHICULAR INCIDENT

State Form 40141 (R2 / 5-90)

INDIANA DEPARTMENT OF NATURAL RESOURCES

INSTRUCTIONS: Within ten (10) days, the completed form (State Form 40141) will be distributed to the following:

- *2 copies to the Director of Safety.*
  (The Director of Safety will forward a copy to the Investigation Division, Attorney General.)
- *1 copy to the DNR division representative involved in the accident*
- *1 copy to be retained by the originator.*

■ PRIVACY NOTICE

This agency is requesting that you disclose your Social Security Number. You have the right to refuse, and will not be penalized for doing so.

TO:
ATTORNEY GENERAL'S OFFICE, INVESTIGATION DIVISION

FROM: *(PROPERTY)*

VIA: *(AGENCY / DIVISION)*

NOTICE

This report is prepared by and for State use. It shall not be published or disseminated to anyone without specific authorization from a representative of the office of the Attorney General of Indiana or a representative of the state agency with the authority to release said information.

TIME, PLACE AND ENVIRONMENT

☐ State Employee ☐ Not a State Employee

Date of Incident *(Month, Day, Year)*

Incident Resulted In: ☐ Personal Injury ☐ Vehicle Damage

Local Time ☐ A.M. ☐ P.M.

Day of Week

Exact Location of Accident

Tort Claim Procedure Issued ☐ Yes ☐ No

WEATHER CONDITIONS:
☐ Clear ☐ Fog, Smoke
☐ Cloudy ☐ Other *(Describe)*
☐ Rain
☐ Snow
☐ Sleet / Hail
☐ Freezing Rain

LIGHT CONDITIONS:
☐ Daylight ☐ Dark *(No Street Lights)*
☐ Dawn / Dusk
☐ Dark *(Street Lights On)*
☐ Dark *(Street Lights Off)*

TYPE OF INCIDENT:
☐ Personal Injury ☐ Property Damage
☐ Fatality ☐ Vehicle Damage

PHOTO INCLUDED: ☐ Yes ☐ No

PROPERTY MAP INCLUDED: ☐ Yes ☐ No

INJURED PERSON

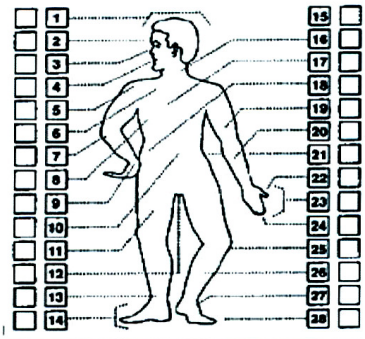
Name of Injured Person	Telephone Number
Address	Date of Birth *(Month, Day, Year)*
City, State and ZIP code	Social Security Number ■

BODILY INJURY STATUS

Below is a numbered list indicating ***Area of Injury****. In the box next to the numbers around the figure, show the type of injury that occurred; using the letter coding indicated under* ***Type of Injury****. This will give an over-all and precise picture of the nature of the injury.*

Area of Injury

Head..... 1	Shoulder..... 5	Wrist..... 9	Ankle..... 13	Chest..... 17	Back..... 21	Knee..... 25
Face..... 2	Collarbone..... 6	Abdomen..... 10	Foot..... 14	Hip..... 18	Thumb..... 22	Lower leg..... 26
Eye..... 3	Elbow..... 7	Thigh..... 11	Skin..... 15	Upper arm..... 19	Hand..... 23	Instep..... 27
Tooth..... 4	Ribs..... 8	Groin..... 12	Neck..... 16	Forearm..... 20	Finger..... 24	Toe..... 28



Indicate skin areas affected!

Type of Injury

WOUNDS.....	Laceration.....	A	BURN.....	Heat.....	L
	Contusion.....	B		Chemical.....	M
	Infection.....	C		Friction.....	N
	Foreign Body.....	D	SKIN.....	Dermatitis.....	O
	Puncture.....	E		Irritation, Rash...	P
			FRACTURE.....		Q
			STRAIN.....		R
EYES.....	Foreign Body.....	F	SPRAIN.....		S
	Burn, Corrosive...	G	GASES.....	Nausea.....	T
	Burn, Heat.....	H		Dizziness.....	U
	Burn, Flash.....	I		Irritation.....	V
	Wound.....	J	PAINS.....		W
	Irritation.....	K	MISCELLANEOUS.....		X

VICTIM STATUS
☐ Conscious
☐ Semi-conscious
☐ Unconscious
☐ Dead

Received First Aid
☐ Yes ☐ No
If Yes, By Whom?

☐ Refused Medical Treatment
☐ Ambulance: Name of Ambulance Service

DISPOSITION
☐ Went Home
☐ Went to Hospital
☐ Saw Physician

WITNESS

Name	Telephone Number
Address	Social Security Number ■
City, State and ZIP code	

(over)

DESCRIPTION OF ACCIDENT

Describe Briefly How the Accident Occurred: **FACTS ONLY.**

LAW ENFORCEMENT

Name of Investigating Officer	Badge / I.D. Number
Department	Law Enforcement Called? ☐Yes ☐No If Yes, By Whom?

OTHER REPORTS

Indiana Operator's Accident Report	Investigative Officer's Report
☐Yes ☐No	☐Yes ☐No

SIGNATURE

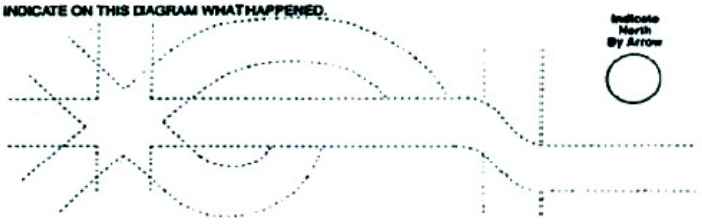
Authorized personnel shall complete and process this report without undue delay.

Report Prepared By:	Title	Date *(Month, Day, Year)*

STATE 1	OTHER VEHICLE 2
VEHICLE 1☐ DRIVER 1☐	VEHICLE 2☐ DRIVER 2☐
Print Driver's Name *(Last, First, MI)*	Print Driver's Name *(Last, First, MI)*
Address *(Street, City, State, ZIP code)*	Address *(Street, City, State, ZIP code)*
Sex / Date of Birth *(Month, Day, Year)* / License Type	Sex / Date of Birth *(Month, Day, Year)* / License Type
License State / Driver's License Number / Restrictions	License State / Driver's License Number / Restrictions
Color / Veh.Yr. / Make / Model Name	Color / Veh.Yr. / Make / Model Name
Veh.Type *(Enter No.)* / Lic.Yr. / License Plate No./Comm. No. / Lic.State	Veh.Type *(Enter No.)* / Lic.Yr. / License Plate No./Comm. No. / Lic.State
Posted Speed Limit / Direction of Travel / No. of Occupants	Posted Speed Limit / Direction of Travel / No. of Occupants
Fire? ☐Yes ☐No / Number of Axles / Towed? ☐Yes ☐No	Fire? ☐Yes ☐No / Number of Axles / Towed? ☐Yes ☐No
Registered Owner's Name	Registered Owner's Name
Address *(Street, City, State, ZIP code)*	Address *(Street, City, State, ZIP code)*

DIAGRAM *(Refer to Vehicles by Number)*

INDICATE ON THIS DIAGRAM WHAT HAPPENED.



INSTRUCTIONS

1. *Follow dotted lines to draw outline of roadway at place of accident.*
2. *Number each vehicle and show direction of travel by arrow.* 1 2
3. *Use solid line to show path before accident.* 1
   dotted line after accident: 1
4. *Show pedestrian by:*
5. *Show railroad by:*
6. *Show distance and direction to landmarks; identify landmarks by name or number.*
7. *Show traffic controls.*

How did the accident happen, and in your opinion, what caused the accident? *(Describe fully, using a separate sheet of paper if necessary.)*

Was Accident Job Related? ☐Yes ☐No	Signature of Immediate Supervisor	Date *(Month, Day, Year)*

OVERDUE AIRCRAFT CALL LIST

The Forest Service considers an aircraft overdue if the aircraft is 30 minutes overdue at its destination and cannot be located. At this point the following procedure should be initiated.

1. Obtain available information outlined in the Aircraft Accident Checklist.

2. Call Program Manager — **Phil Marshall**
(W) 317-232-4120
(C) 812-595-2740

   Who will:

   a. Call the Air Force Rescue Coordination Center (AFRCC) at Tyndall AFB, FL — **(800) 851-3051**

   b. Notify USFS Aviation Officer — **Marc Roberts**
(651) 470-3153 / (651) 649-5268

   Or — **Mike Connor**
(651) 247-8076 / (651) 649-5180

   - Who Notifies Northeastern Area Aviation Officer — **Dan Zimmerman**
(610) 557-4147 / (610) 742-7860

   c. Notify local law enforcement — **Specific Site Emergency Numbers**

CRASHED AIRCRAFT OFF AIRPORT CALL LIST

1. Rescue survivors - Render first aid.

2. Coordinate local crash/rescue, if available.

3. Complete actions in Aircraft Accident Instructions.

4. Fill out Aircraft Accident Checklist.

5. Call Program Manager

Phil Marshall
(W) 317-232-4120
(C) 812-595-2740

Who will:

a. Notify USFS Aviation Officer — **Marc Roberts**
(651) 470-3153 / (651) 649-5268

Or — **Mike Connor**
(651) 247-8076 / (651) 649-5180

- Who notifies Northeastern Area Aviation Officer (USFS) — **Dan Zimmerman**
(610) 557-4147 / (610) 742-7860

b. Notify local law enforcement — **Specific Site Emergency Numbers**

CRASHED AIRCRAFT AT AIRPORT CALL LIST

1. Call local crash/rescue, if available. **911**

2. Rescue survivors - render first aid.

3. Evacuate injured.

   a. Notify hospital, doctor **911**

   b. Notify local law enforcement **911**

4. Complete actions in Aircraft Accident Instructions.

5. Fill out Aircraft Accident Checklist.

6. Call Program Manager

   Phil Marshall
   (W) 317-232-4120
   (C) 812-595-2740

   Who will:

a. Notify USFS Aviation Officer **Marc Roberts**
   (651) 470-3153 / (651) 649-5268

   Or **Mike Connor**
   (651) 247-8076 / (651) 649-5180

   - Who notifies Northeastern Area Aviation Officer (USFS) **Dan Zimmerman**
     (610) 557-4147 / (610) 742-7860

b. Notify local law enforcement **Specific Site Emergency Numbers**

AIRCRAFT ACCIDENT CHECKLIST

(Do not delay emergency reporting calls by trying to fill in all the blanks)

1. Point of Contact Information (the person who will provide information and direct actions)		
a. Name		c. Duty Position:
b. Phone Numbers		d. Address:
Work:	Cell:	
Fax:	Home:	e. E-mail:

2. Accident Information		
a. Aircraft Registration/Tail Number	Type of Aircraft	Color
b. Date and Time of Accident		
c. Location of Aircraft (Grid, Lat/Log, Reference to Known Point)		
d. Hazardous Materials Involved? (Explosives, Radioactive Materials, etc.)		
e. Witnesses identified and statements requested?		
f. Accident Site Secured?	Photos Taken?	
g. Flight Data Recorder Secured? (if applicable)	ELT Deactivated?	
h. Total Number of Personnel Involved		
Number of Fatalities	Number of Injuries	

3. Accident Description (type of mission, what happened, weather, extent of damage, etc.)

4. Admin Information	
a. Aircraft Owner	b. Operator
c. Pilot in Command	
d. Point of Last Departure	e. Destination
f. Route of Flight	g. Fuel on Board
h. Nearest Commercial Airport	i. Suitable Helicopter Landing Site
j. Other	

AIRCRAFT RESCUE INSTRUCTIONS

At an aircraft crash site, the National Transportation Safety Board (NTSB), has officially stated and declared that all crash sites are considered contaminated and injuries inflicted from debris could be fatal, based on HIV and Hepatitis B research reports. It is very critical that these sites be handled with the utmost care from the time of the accident until properly clothed investigators arrive at the site. Make every effort to disturb the crash site as little as possible. The less disturbed the crash site remains, the easier it will be to investigate the cause.

Rescue

1. Do not become a victim by placing yourself in jeopardy. Use good judgment and assist survivors and render first aid **to the best of your abilities** until relieved by medical personnel.

2. If there is any danger of post crash fire, move survivors to a safe place.

3. Keep bystanders and unauthorized personnel away from crash site.

4. Establish "no smoking" rule. Fire and explosion are real dangers with residual fuels and hot metal.

Search the wreckage carefully for other survivors

Exercise good judgment and use appropriate personal protective equipment.

Hazards at an aircraft accident site can include:

1. **Biological Hazards:** HIV, Hepatitis B and others.

2. **Toxic Substances:** Fuel, oil, hydraulic fluid, and aircraft materials such as beryllium, lithium, chromium, and mercury.

3. **Pressure Vessels:** Hydraulic accumulators, struts, oxygen cylinders, and fire extinguishers.

4. **Mechanical Hazards:** Metal under tension (rotor blades bent under fuselage), heavy objects, composite materials, and sharp edges.

5. **Fire Hazards:** Unburned fuel, hot metal (or other materials), aircraft batteries, pyrotechnics, and the ignition of grass as a result of the accident.

6. **Environmental Hazards:** Weather, terrain, animals.

Notify the Program Manager

Preserve the accident site

The area to be quarantined shall not be less than 300 feet in diameter (length of football field) and encompasses the entire wreckage. Every piece of the aircraft and its location is important to the investigators. Nothing should be disturbed. If something must be disturbed in order to remove survivors or for fire suppression activities, document and/or photograph the location of any debris. Use local law enforcement to secure site. Treat the area as if it were a crime scene and provide 24 hour security until investigation team arrives.

Identify witnesses (critical element)

1. Obtain witness statements, if possible.

2. Collect names, addresses, and phone numbers

All US Department of Interior (DOI) and US Department of Agriculture Forest Service (USDA FS) aircraft mishaps are investigated under the authority of the NTSB as defined in:

1. 49 Code of Federal Regulations (CFR) parts 830 and 831

2. Public Law (PL) 103-411

This means that regardless of severity, all aircraft mishaps (accidents or incidents) are the domain of the NTSB. If NTSB elect not to visit the site and physical investigation is conducted by DOI or USDA FS personnel, it is still a NTSB investigation and investigative efforts must comply with their rules and regulations.

Foray® 76B
MSDS# BIO-0012 Rev. 3 **ISSUED 03/11/11**

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MATERIAL NAME: Foray® 76B
EPA Reg.No.: 73049-49
Code Number: 35530
List Number: 60176
PCP Number : 24976

SYNONYMS: Biobit® XLP; VBC-6431

MANUFACTURER: Valent BioSciences Corporation
870 Technology Way, Suite 100
Libertyville, Illinois 60048

EMERGENCY TELEPHONE NUMBERS
Emergency Health or Spill:
Outside the United States: 651-632-6184
Within the United States: 877-315-9819

2. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT NAME: Bacillus thuringiensis, var. kurstaki
CONCENTRATION: 18.44%
CAS NUMBER: 68038-71-1
OSHA-PEL 8HR TWA: N/L
STEL: N/L
CEILING: N/L
ACGIH-TLV 8HR TWA: N/L
STEL: N/L
CEILING: N/L
OTHER 8HR TWA: N/A
LIMITS STEL: N/A
CEILING: N/A

INGREDIENT NAME: Inert/Other ingredients - Proprietary Information
CONCENTRATION: 81.56%
CAS NUMBER: N/A
OSHA-PEL 8HR TWA: N/L
STEL: N/L
CEILING: N/L
ACGIH-TLV 8HR TWA: N/L
STEL: N/L
CEILING: N/L
OTHER 8HR TWA: N/A
LIMITS STEL: N/A
CEILING: N/A

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3. HAZARDS INFORMATION

EMERGENCY OVERVIEW: Product is non-toxic by ingestion, skin contact, or inhalation. May be irritating to skin and eyes.

ROUTE(S) OF ENTRY: Skin: No
Inhalation: No
Ingestion: No

SKIN CONTACT: Mild irritant

SKIN SENSITIZATION: Possible mild sensitizer (unconfirmed)

EYE CONTACT: Mild irritant

TARGET ORGANS: N/D

CARCINOGENICITY RATING: NTP: N/L IARC: N/L OSHA: N/L ACGIH: N/L
None

SIGNS AND SYMPTOMS: Direct contact with eyes or skin may cause mild irritation.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: N/D

4. FIRST AID MEASURES

EYES: Remove from source of exposure. Flush with copious amounts of water. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

SKIN: Remove from source of exposure. Flush with copious amounts of water. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

INGESTION: Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

INHALATION: Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

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5. FIRE FIGHTING PROCEDURES

FLASH POINT: N/A (Aqueous suspension)
FLASH POINT METHOD: N/A
LOWER EXPLOSIVE LIMIT(%): N/A
UPPER EXPLOSIVE LIMIT(%): N/A
AUTOIGNITION TEMPERATURE: N/A

FIRE & EXPLOSION HAZARDS: Non-flammable and no explosive properties.

EXTINGUISHING MEDIA: Use appropriate media for underlying cause of fire.

FIRE FIGHTING INSTRUCTIONS: Wear protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

SPILL OR RELEASE PROCEDURES: Recover product and place in an appropriate container for disposal. Ventilate and wash the spill area.

7. HANDLING AND STORAGE

HANDLING: The usual precautions for handling chemicals should be observed.

STORAGE: Store in a closed container in a cool, dry place.

SPECIAL PRECAUTIONS: Wash thoroughly with soap and water after handling. Keep impervious gloves on until all potentially contaminated personal protective equipment is removed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use local exhaust

RESPIRATORY PROTECTION: Not usually required. If necessary, use a dust/mist respirator meeting NIOSH standards of at least N-95, R-95 or P-95.

SKIN PROTECTION: Impervious gloves, clothing to minimize skin contact.

EYE PROTECTION: Not usually required. If necessary, use safety glasses or goggles.

OTHER PROTECTION: Wash thoroughly with soap and water after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/PHYSICAL STATE: Light brown aqueous suspension
ODOR: Pungent, musty odor
BOILING POINT: N/D
MELTING/FREEZING POINT: N/D
VAPOR PRESSURE (mm Hg): N/D
VAPOR DENSITY (Air=1): N/D
EVAPORATION RATE: N/D
BULK DENSITY: 1.12-1.2 g/cm3
SPECIFIC GRAVITY: N/D
SOLUBILITY: Readily mixable with water
pH: 4.1-4.8 as a 10% solution in water
VISCOSITY: N/D

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Not chemically reactive.

INCOMPATIBILITIES: Alkalinity inactivates product.

HAZARDOUS DECOMPOSITION PRODUCTS: N/D.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

ORAL LD50: N/D. > 5,000 mg/kg (rat) for a similar formulation. EPA Toxicity Category IV

DERMAL LD50: N/D. > 2,500 mg/kg (rabbit) for a similar formulation. EPA Toxicity Category III

INHALATION LC50: N/D. In a nose-only inhalation study with rats with a similar formulation, no lethality was observed at the highest attainable aerosol concentration of 6.81 mg/liter for 4 hours.

CORROSIVENESS: N/D. Not expected to have any corrosive properties.

DERMAL IRRITATION: Transient, slight or mild irritation noted in a dermal irritation study with a similar formulation. EPA Toxicity Category IV.

OCULAR IRRITATION: Transient, mild irritation was observed in test animals in a study a similar formulation. EPA Toxicity Category III.

11. TOXICOLOGICAL INFORMATION, continued

DERMAL SENSITIZATION: N/D. The possibility of mild senstization exists with this formulation, however, this has not been confirmed by actual experience.

SPECIAL TARGET ORGAN EFFECTS: N/D

CARCINOGENICITY INFORMATION: N/D. None of the components are classified as carcinogens.

12. ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: Studies on non-targets have been performed without identifying any organisms at risk. The following species have been included in the testing: mammals (rats, rabbits); freshwater aquatic organisms (Daphnia magna, Rainbow Trout); birds (Mallard, Bobwhite); and non-target insects (Green Lacewing larvae, Ladybird Beetles, Honey Bee).

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHODS: Dispose of product in accordance with federal, state and local regulations.

14. TRANSPORTATION INFORMATION

DOT STATUS: Not Regulated
PROPER SHIPPING NAME: N/A
HAZARD CLASS: N/A
UN NUMBER: N/A
PACKING GROUP: N/A
REPORTABLE QUANTITY: N/A

IATA/ICA0 STATUS: Not Regulated
PROPER SHIPPING NAME: N/A
HAZARD CLASS: N/A
UN NUMBER: N/A
PACKING GROUP: N/A
REPORTABLE QUANTITY: N/A

Foray® 76B
MSDS# BIO-0012 Rev. 3 **ISSUED 03/11/11**

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14. TRANSPORTATION INFORMATION, continued

IMO STATUS: Not Regulated
PROPER SHIPPING NAME: N/A
HAZARD CLASS: N/A
UN NUMBER: N/A
PACKING GROUP: N/A
REPORTABLE QUANTITY: N/A
FLASH POINT: N/A

15. REGULATORY INFORMATION

TSCA STATUS: Exempt RCRA STATUS: N/D

CERCLA STATUS: N/D PROP 65 (CA): N/D

SARA STATUS: N/D

16. OTHER INFORMATION

REASON FOR ISSUE: re-issue
APPROVAL DATE: 03/11/11
SUPERSEDES DATE: 09/12/07

LEGEND: N/A = Not Applicable
N/D = Not Determined
N/L = Not Listed
L = Listed
C = Ceiling
S = Short-term
® = Registered Trademark of Valent BioSciences
™ = Registered Trademark of Valent BioSciences

The information and recommendations contained herein are based upon tests believed to be reliable. However, Valent BioSciences does not guarantee their accuracy or completeness nor shall any of this information constitute a warranty, whether expressed or implied, as to the safety of the goods, the merchantability of the goods, or the fitness of the goods for a particular purpose. Adjustment to conform with actual conditions of usage may be required. Valent BioSciences assumes no responsibility for results obtained or for incidental or consequential damages arising from the use of these data. No freedom from infringement of any patent, copyright or trademark is to be inferred.

VALENT BIOSCIENCES CORPORATION
870 Technology Way, Suite 100
Libertyville, IL 60048 - 800-323-9597

HERCON® Environmental

SAFETY DATA SHEET

SECTION I – INDENTIFICATION AND COMPANY INFORMATION

PRODUCT NAME: HERCON® MICRO-TAC™
Target Insect: Sticker agent for Hercon Mating Disruptant products
CHEMICAL FAMILY: Adhesive; Vinyl Acrylic Emulsion
MSDS Number: FI 100777 Date: Dec 03, 2013
COMPANY: ABERDEEN ROAD COMPANY d/b/a HERCON ENVIRONMENTAL
P.O. Box 435
Aberdeen Road
Emigsville, PA 17318
For more information call 717-764-1192 or the National Pesticide Information Center , (www.npic.orst.edu), 800-858-7378 or call your poison control center at 1-800-222-1222

SECTION II. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW
Physical State: *Liquid*
Color: *White*
Odor: *Faint odor*
Signal Word: *Caution!*
HAZARD STATEMENTS: *May cause respiratory tract and eye irritation. Possible cancer hazard – contains material which MAY cause cancer*
Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Avoid breathing vapor or mist. Use only with adequate ventilation. Avoid contact with eyes. Keep container tightly closed. Use personal protective equipment as required.
Wash thoroughly after handling.
OSHA/HCS STATUS: *This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).*
ROUTES OF ENTRY*: Eye contact. Inhalation*
POTENTIAL ACUTE HEALTH EFFECTS:
Inhalation: Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation. *Slightly irritating to the respiratory system.*
Ingestion*: No known significant effects or critical hazards.*
Skin: *: No known significant effects or critical hazards.*
POTENTIAL CHRONIC HEALTH EFFECTS:
Chronic effects: No known significant effects or critical hazards.
Carcinogenicity: Contains material which may cause cancer. Risk of cancer depends on duration and level of exposure.

SECTION III. COMPOSITION AND INFORMATION ON INGREDIENTS

COMMON NAME*: Vinyl Acetate*
C.A.S. NUMBER: *108-05-4*
% IN FORMULATION*: 0.1-0.5%*
There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section

SECTION IV. FIRST AID MEASURES

EYE CONTACT: Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately. Call a poison control center or doctor immediately for treatment advice.

SKIN CONTACT: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get Medical attention immediately.

INHALATION: Move exposed person to fresh air. If person is not breathing, if breathing is irregular or if respiratory arrest occurs, call 911 or an ambulance, and then provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband.

INGESTION: Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Call a poison control center or doctor immediately for treatment advice.

PROTECTION OF FIRST AIDERS: No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

NOTES TO PHYSICIAN: No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. For emergency information concerning this product, call the National Pesticide Information Center (NPIC) at 1-800-858-7378 seven days a week, 6:30 am to 4:30 pm Pacific Time (NPIC Web site: www.npic.orst.edu). After 4:30 pm call your poison control center at 1-800-222-1222.

SECTION V. FIRE – FIGHTING MEASURES

FLAMMABILITY OF PRODUCT: In a fire or if heated a pressure increase will occur and the container may burst.

EXTINGUISHING MEDIA: Suitable: Use an extinguishing agent suitable for the surrounding fire.
Not Suitable: None Known

SPECIAL EXPOSURE HAZARDS: *Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any person risk or without suitable training.*

SPECIAL FIRE FIGHTING PROTECTIVE EQUIPMENT: *If involved in fire, fire fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Do not inhale fumes.*

SECTION VI. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: *No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. (Section VIII)*

ENVIRONMENTAL PRECAUTIONS: *Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air)*

SMALL SPILLS: *Stop leak if without risk. Move containers from spill area. Dispose of via licensed waste disposal contractor or consultant. Absorb with an inert material*

LARGE SPILLS: *Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section XIII). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. NOTE: see section I for emergency contact information and Section XIII for waste disposal.*

SKIN CONTACT: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get Medical attention immediately.

INHALATION: Move exposed person to fresh air. If person is not breathing, if breathing is irregular or if respiratory arrest occurs, call 911 or an ambulance, and then provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband.

INGESTION: Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Call a poison control center or doctor immediately for treatment advice.

PROTECTION OF FIRST AIDERS: No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

NOTES TO PHYSICIAN: No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. For emergency information concerning this product, call the National Pesticide Information Center (NPIC) at 1-800-858-7378 seven days a week, 6:30 am to 4:30 pm Pacific Time (NPIC Web site: www.npic.orst.edu). After 4:30 pm call your poison control center at 1-800-222-1222.

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SECTION VII. HANDLING AND STORAGE

HANDLING: *Put on appropriate personal protective equipment (Section 8). Eating drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous do not reuse container.*

STORAGE: *Store between the following temperatures: 10 to 32.22^{0}C (50-90^{0}F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a cool, and well-ventilated area, away from incompatible materials (see Section X) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.*

SECTION VIII. EXPOSURE CONTROLS/ PERSONAL PROTECTION INFORMATION

COMPONENT	EXPOSURE LIMITS
Vinyl acetate	ACGIH TLV (USA, 2/2010) TWA: 10 ppm 8 hours TWA: 35 mg/m^3 8 hours STEL: 15 ppm 15 minutes STEL 53 mg/m3 15 minutes OSHA PEL 1989 (USA, 3/1989). TWA: 10 ppm 8 hours TWA: 30 mg/m3 8 hours STEL: 20 ppm 15 minutes STEL: 60 mg/m3 15 minutes NIOSH REL (USA, 6/2009). CEIL: 4 ppm 15 minutes CEIL: 15 mg/m3 15 minutes

Consult local authorities for acceptable exposure limits.
Use only with adequate ventilation. If user operations generate dust, fumes, gas vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

PERSONAL PROTECTION:

RESPIRATORY: *Use a properly fitted, air purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.*

HANDS: *Chemical resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.*

EYES: *Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.*

SKIN: *Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling product.*

ENVIRONMENTAL EXPOSURE CONTROLS: *Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.*

SECTION IX. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: *Liquid*
FLASH POINT: *Closed cup: > 93.33^{0}C*
COLOR: *White*
ODOR DESCRIPTION: *Faint odor*
pH: *5.8 to 6.8*
BOILING/CONDENSATION POINT: *98.89^{0}C*
BULK DENSITY: *N/A*
RELATIVE DENSITY: *1.02*
VOLATILITY: *43% (W/W)*
EVAPORATION POINT: *< 1 (butyl acetate =1)*
VOC (less water, less exempt solvents)
DISPERSIBILITY PROPERTIES: *Dispersible in the following materials: cold water.*

SECTION X: STABILITY AND REACTIVITY

PRODUCT STABILITY:UNSTABLE_____STABLE_____X_____
HAZARDOUS POLYMERIZATION: May Occur_____May Not Occur_X_____
CONDITIONS TO AVOID: D*o not store near easily ignited chemicals and materials or open flames.* MATERIAL TO AVOID: *Strong oxidizing agents* HAZARDOUS DECOMPOSITION PRODUCTS: *On combustion, the polymeric dispensers may produce CO, CO_2, HCL and CL_2.*

SECTION XI TOXICOLOGICAL INFORMATION

United States and Canada
ACUTE TOXICITY

Vinyl acetate	*LC50 Inhalation Vapor (Rat) 11,400 mg/m3 4 hours exposure* *LD50 Dermal (Rabbit) 2335 mg/kg* *LD50 Oral (Rat) 2900 mg/kg*
CHRONIC TOXICITY:	*No known significant effects or critical hazards*

IRRITATION/CORROSION

Product	*Skin-Primary dermal irritation (Rabbit) Index PDII 0.5 score, 24 hr. dose units 1.0 ml/rabbit, results read in 72 hours*

CONCLUSION/SUMMARY

EYES:	*Moderately irritating to eyes*
RESPIRATORY:	*Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation.*
SENSITIZER:	*No know significant effects or critical hazards.*

CARCINOGENICITY:
CLASSIFICATION

INGREDIENT	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Vinyl acetate	A3	2B	-	-	-	-

MUTAGENICITY:	*No known significant effects or critical hazards.*
TERATOGENICITY:	*No known significant effects or critical hazards.*
REPRODUCTIVE TOXICITY:	*No known significant effects or critical hazards.*

SECTION XII: ECOLOGICAL INFORMATION

United States and Canada

ECOTOXICITY: *No known significant effects or critical hazards.*

AQUATIC ECOTOXICITY

Vinyl acetate *Acute LC50 10,000 to100,000ug/l Marine water ,species; Crustaceans- Crangon crangon- Larvae 48 hours exposure*

Acute LC50 14,000 ug/L Fresh water, species; Fish Pimephales- 1 day 96 hour exposure

PERSISTANCE/DEGRADABILITY: *No known significant effects or critical hazards.*

SECTION XIII: DISPOSAL CONSIDERATIONS

***WASTE DISPOSAL**: The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains, and sewers. Disposal should be in accordance with applicable regional, national and local laws and regulations. Refer to Section VII: HANDLING AND STORAGE and Section VIII: EXPOSURE CONTROL/PERSONAL PROTECTION for additional handling information and protection of employees.*

SECTION XIV: TRANSPORTATION INFORMATION

Ground Transport (DOT) Classification: Not Regulated

SECTION XV: REGULATORY INFORMATION

United States

Hazard Communication Standard (HCS)Classification: Irritating material; Carcinogen

US Federal Regulations: TSCA 4 (a) final test rules: sodium hydroxymethanesulphinate
TSCA 8(a) PAIR: mequinol; Nonylphenol, branched, ethoxylated
TSCA 8(a)IUR Exempt/Partial exemption: Not determined
US TSCA 8b: all components are listed or exempted.
SARA 302/304/311/312 extremely hazardous substances: None
SARA 302/304 emergency planning and notification: None
SARA 302/304/311/312 hazardous chemicals: None
SARA 311/312 MSDS distribution – chemical inventory – hazard identification: None

SARA Title III Part 313: Not reportable
313 Reportable Ingredients: None
Clean Air Act Ozone Depleting Chemical Substances: None
Clean Air Act Hazardous Air Pollutants: None
Volatile Organic Compounds: None

With respect to FFDCA 409, this product is considered an indirect food additive and is compliant with 21 CFR 175.105 for adhesives as an indirect food additives

***FDA Compliance:** 21 CFR 175.105, 16 CFR 1500.3(C)(4), 16 CFR 1500.3(C)(2)(i)*

1

SECTION XVI OTHER INFORMATION

MSDS NUMBER_____DATE ISSUED:)_____
BY: Priscilla MacLean_____DATE REVISED:
TITLE: Product Development Manager_____ Replaces

WARRANTY AND LIMITATION OF DAMAGES

Hercon Environmental warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in accordance with the Directions for Use under normal conditions of use to the extent allowed by state law. Hercon neither makes, not authorizes any agent or representative to make any other warranty of fitness or of merchantability, guarantee or representation, expressed or implied concerning this material except as stated above. This warranty does not extend to the use of this product contrary to the label instructions, or under abnormal use conditions, or under conditions not reasonably foreseeable to Hercon Environmental. If this product is defective, Buyer's exclusive remedy shall be the replacement of the product, or if replacement is impracticable as determined by Hercon, refund of the purchase price. To the extent allowable by law, Hercon's maximum liability for breach of this warranty shall not exceed the purchase price of this product. In no case will Hercon be liable for incidental, consequential or special damages resulting from handling, storage, use, misuse or abuse of this product.

To the best of the supplier's knowledge, the information contained herein is accurate. However neither the above-named supplier, nor any if its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are only hazards that exist.

HERCON® Environmental

MATERIAL SAFETY DATA SHEET

SECTION I – INDENTIFICATION AND COMPANY INFORMATION

PRODUCT NAME: HERCON® DISRUPT® II Gypsy Moth Mating Disruptant
Target Insect: Gypsy Moth, Lymantria dispar
Pheromone Dispenser for Use as a Mating Disruptant,
MSDS Number: 100306kg Date: March 19, 2013
COMPANY: ABERDEEN ROAD COMPANY d/b/a HERCON ENVIRONMENTAL
P.O. Box 435
Aberdeen Road
Emigsville, PA 17318
For an emergency or more information call 717-764-1192 or the National Pesticide Information, 800-858-7378

SECTION II. HAZARDOUS MATERIAL IDENTIFICATION SYSTEM

HEALTH = 1, FLAMMABILITY = 0, REACTIVITY = 0
*

SECTION III. COMPOSITION AND INFORMATION ON INGREDIENTS

ACTIVE
COMMON NAME*: Racemic Disparlure*
CHEMICAL NAME: *(7R,8S) cis 7,8-epoxy-2-methyloctadecane*
CHEMICAL FAMILY of active ingredient*: Insect Pheromone*
C.A.S. NUMBER: *35898-62-5*
FORMULA: $C_{19}H_{38}O$
CONSTRUCTION: Laminated PVC controlled release dispenser 1/32" X 3/32" to be aerially applied with an appropriate sticker ***EPA Reg. No. 8730-55***

SECTION IV. FIRST AID MEASURES

IF SWALLOWED:
- Call a poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to by a poison control center or doctor.
- Do not give anything t o an unconscious person.

IF IN EYES:
- Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.
- Call a poison control center or doctor immediately for treatment advice.

IF ON SKIN:
- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call a poison control center or doctor immediately for treatment advice.

IF INHALED:
- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.
- Call a poison control center or doctor immediately for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. For emergency information concerning this product, call the National Pesticide Information Center (NPIC) at 1-800-858-7378 seven days a week, 6:30 am to 4:30 pm Pacific Time (NPIC Web site: www.npic.orst.edu). After 4:30 pm call your poison control center at 1-800-222-1222.

SECTION V. FIRE HAZARD INFORMATION

FLASH POINT: *N/A* FLAMMABLE LIMITS in air: *N/A* **PRODUCT HAZARD INFORMATION**
EXTINGUISHING MEDIA: Dry chemical, foam, water fog or spray *Carbon dioxide, foam*
SPECIAL FIRE FIGHTING PROCEDURES: *If involved in fire, use air-supplied equipment. Do not inhale fumes. Wear full protective equipment and NIOSH approved pressure demand, self contained breathing apparatus* UNUSUAL FIRE AND EXPLOSION HAZARDS: *When burned the hazardous decomposition products that will result because of incomplete combustion include carbon monoxide, other unidentified products of hydrocarbon degradation, No_x, low level cyanides and hydrogen chloride.*

SECTION VI. ACCIDENTAL RELEASE MEASURE

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: *If product has spilled pick up mechanically. Place unpouched product in tightly sealed containers. Keep out of water sources and sewers.*

SECTION VII. HANDLING AND STORAGE

GENERAL PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: *Store in sealed containers in a cool, dry place and away from open flames. To maintain product integrity protect from high temperatures. Keep container closed. Launder contaminated clothing before use. Wear protective equipment described above if exposure conditions warrant. Do not contaminate water sources, food or feed.*

SECTION VIII. PERSONAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: *Usually none required.*
EYE PROTECTION: *Usually none required*
VENTILATION: *Good general ventilation should be sufficient.*
PROTECTIVE GLOVES: *None required but vinyl, latex or rubber gloves recommended for continuous handling.*
OTHER PROTECTIVE EQUIPMENT: *None under normal usage.*
NOTE: *Personal protection information shown above is based upon general nformation as to normal uses and conditions. Where special or unusual uses or conditions exist, it is suggested that the expert assistance of an industrial hygienist or other qualified professional be sought.*

SECTION IX. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL PROPERTIES
BULK DENSITY: *N/A*
SPECIFIC GRAVITY/25^0C: *0.9*
MELTING POINT: *300^0F*
BOILING POINT: *N/A*
FREEZING PT: *N/A*
pH: *N/A*
PERCENT VOLATILE by volume: *None specified*
ODOR DESCRIPTION: *Mild*
VAPOR DENSITY (AIR = 1): *N/A*
VAPOR PRESSURE (20^0C, mm HG): *Not determined*
SOLUBILITY IN WATER: *Insoluble*
PERCENT ACTIVE IN PRODUCT: *17.9%*

SECTION X: STABILITY AND REACTIVITY

PRODUCT STABILITY:UNSTABLE_____STABLE_____X_____
HAZARDOUS POLYMERIZATION: May Occur_____May Not Occur_X_____

CONDITIONS TO AVOID: *Do not store near easily ignited chemicals and materials or open flames.* MATERIAL TO AVOID: *Strong oxidizing agents* HAZARDOUS DECOMPOSITION PRODUCTS: *On combustion, the polymeric dispensers may produce CO, CO_2, HCL and CL_2.*

SECTION XI TOXICOLOGICAL INFORMATION

HEALTH/TOXICITY INFORMATION: *Toxicological properties of the active ingredient have been investigated: Oral LD50 (rat) >34,000 mg kg. Dermal LD50 (rat) >2,025 mg/kg. Use appropriate procedures to prevent direct contact with skin or eyes and prevent inhalation. No significant toxicity is expected*
EFFECTS OF OVEREXPOSURE: *None reported*

SECTION XII: ECOLOGICAL INFORMATION

No adverse effections have been reported.
The ecotoxicological effects of this product have not been evaluated.
Chemical Fate Information No data available.

SECTION XIII: DISPOSAL CONSIDERATIONS

***PESTICIDE DISPOSAL**: Waste resulting from the use of this product may be disposed of onsite or at an approved disposal facility. **CONTAINER DISPOSAL**: Plastic bag: Non-refillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or incinerate or if allowed by state or local authorities, by burning. If burned stay out of smoke. Cardboard Box [when used as outside packaging]: Dispose of outside cardboard box in sanitary landfill or by incineration or if allowed by state and local authorities, by burning. If burned stay out of smoke. Metal drums [when used as outside packaging] Offer for recycling or reconditioning, or dispose of in sanitary landfill, or by other procedures approved by state and local authorities as long as none of the bags containing product have broken while in the drum. If bags have broken, triple rinse the drum and then offer for resulting or reconditioning, or dispose of in a sanitary landfill.*

SECTION XIV: TRANSPORTATION INFORMATION

Ground Transport (DOT)
Biopesticide Class 60

SECTION XV: REGULATORY INFORMATION

OSHA Classification: Non-Hazardous
TSCA Status: Not listed on TSCA
CERCLA: Not subject to reporting requirements
RCRA: Non- hazardous
SARA Title III: Not reportable
313 Reportable Ingredients: None
Clean Air Act Ozone Depleting Chemical Substances: None
Clean Air Act Hazardous Air Pollutants: None
Volatile Organic Compounds: None
USDA Status: EPA Reg. No. 8730-55

This product is not intended for use where it is directly applied to food products

SECTION XVI OTHER INFORMATION

MSDS NUMBER 100306 DATE ISSUED: 17 Sept. 1986 (LZ)
BY: Priscilla MacLean DATE REVISED: 19 March 2013
TITLE: Product Development Manager Replaces 14 September 2009

WARRANTY AND LIMITATION OF DAMAGES

Hercon Environmental warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in accordance with the Directions for Use under normal conditions of use to the extent allowed by state law. Hercon neither makes, not authorizes any agent or representative to make any other warranty of fitness or of merchantability, guarantee or representation, expressed or implied concerning this material except as stated above. This warranty does not extend to the use of this product contrary to the label instructions, or under abnormal use conditions, or under conditions not reasonably foreseeable to Hercon Environmental. If this product is defective, Buyer's exclusive remedy shall be the replacement of the product, or if replacement is impracticable as determined by Hercon, refund of the purchase price. To the extent allowable by law, Hercon's maximum liability for breach of this warranty shall not exceed the purchase price of this product. In no case will Hercon be liable for incidental, consequential or special damages resulting from handling, storage, use, misuse or abuse of this product.

ISCA TECHNOLOGIES
Pest Management Tools & Solutions

Material Safety Data Sheet

SPLAT GM
Gypsy Moth technical pheromone with wax, water, carriers and surfactants

Section 1- Substance and Company Information

Trade Name: SPLAT GM		Chemical description: Mixture of wax, emulsifiers and carriers all listed by EPA as exempt from the requirement of tolerance	
Manufacturer's Name: ISCA Technologies, Inc.		Address: 2060 Chicago Ave. Suite C2, Riverside, CA 92507	EPA Est. # 80286-CA-003
Information Calls: (951) 686-5008	Date Prepared: 02/22/08	Prepared by: DZ	Notice: Judgment based on indirect test data.

Section 2 – Physical/Chemical Characteristics

Section 2.1 – Active Ingredient Characteristics

Molecular formula: $C_{18}H_{38}O$	Molecular weight (g): 282.51
Molecular Name: 2-methyl-7(R),8(S)-epoxy octadecane	CAS #: 29804-22-6

Section 2.2 – SPLAT Characteristics

Boiling Point: 100°C @ 760 mm/Hg		Specific Gravity (H_2O=1): 0.87 ± 0.05 g/mL	
Vapor Density: (Air=1): N/A			
Solubility in Water: limited solubility	pH: 7	Water Reactive: NO	Appearance and Odor: creamy dark grey, slightly waxy floral odor

Section 3 – Fire and Explosion Hazard Data

Flammability as per USA flame projection test (aerosols): NA		Flash Point and Method Used: NA
Auto Ignition Temperature: NA	Extinguisher Media: CO_2, Foam, dry chemical	Potential hazardous products of combustion: Carbon dioxide, carbon monoxide, smoke, fumes, unburned hydrocarbons, aldehydes and other products of combustion
Unusual Fire & Explosion Hazards: None		Special Fire Fighting Procedures: Use standard fire fighting procedures.

Section 4 – Reactivity Hazard Data

Stability: Stable under ordinary conditions of use and storage	Incompatibility (Materials to avoid): None known.	Hazardous Polymerization: None known
Hazardous Decomposition Byproducts: None known		Conditions to Avoid: Presents no special reactivity hazard

Section 5 – Toxicological Data

Toxicity	Primary Routes of Entry			
	Inhalation	Ingestion	Skin Absorption	Eye
Acute Effects:	No data available	No data available	No data available	No data available
Chronic Effects:	No data available	No data available	No data available	No data available
Special Remarks:	Most likely route of entry is through skin.			
Medical Conditions Generally Aggravated by Exposure:	None Known.			

Section 6 – Emergency First Aid Procedures

Eye Contact:	Flush with water for 15 min. Seek medical help if necessary.
Skin Contact:	Wash area well with water. Seek medical help if necessary.
Inhalation:	Remove to fresh air. Give oxygen and call a physician.
Ingestion:	Administer water and call a physician or poison control center immediately. Do not induce vomiting.

Section 7 – Control and Protective Measures

Respiratory Protection (specify type): None normally needed.	
Protective Gloves:	Rubber gloves.
Eye Protection:	Splash proof safety glasses
Ventilation Requirements:	Mechanical.
Other protective clothing & equipment:	Safety shower, eye wash.
Hygienic Work Practices:	Do not smoke, eat, drink or apply cosmetics in work area! Wash with soap and water after contact. Wash at the end of each work shift and before eating, smoking and using the toilet.

Section 8 – Precautions for Safe Handling and Use

Steps to be taken if material is spilled or released: Standard absorbents can be used.	
Waste Disposal Methods:	Incineration or sanitary landfill in accordance with local, state, and federal regulations.
Precautions to be taken in handling & storage:	Store tightly sealed in a cool, well-ventilated area. Observe all warnings and precautions listed for the product. Use in accordance with good manufacturing and industrial hygiene practices. Use product in a properly ventilated work area. Do not eat, drink or smoke while handling product.
Other Precautions and/or Special Hazards:	None

Section 9 – Regulatory Information

HMIS Rating: Health Hazard 1; Fire Hazard 1; Reactivity 0; Personal Protection B (section 7)

DOT Hazard Classification: Not Regulated

The chemical, physical and toxicological properties of this product have not been thoroughly investigated. The above information is believed to be current and accurate; however, ISCA Technologies, Inc. makes no warranty with respect to such information and assumes no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information. **OSHA** (U.S. Occupational Safety and Health Administration) **PEL** (Permissible Exposure Limit) an exposure value that means exactly the same as a ACGIH TLV, except that it is enforceable by OSHA

*Chemical Listed as Carcinogen or Potential Carcinogen. [a] NTP [b] IARC Monograph [c] OSHA [d] Not Listed [e] Animal Data Only.

EMERGENCY TELEPHONE NUMBERS
2015 COOPERATIVE GYPSY MOTH PROJECT

Lake County

SITE (Treatment Method):	Gary 1 (Btk) Gary 2 (Btk)
Hobart Police Department **705 E. Fourth St. Hobart, IN 46342**	**911 or 219-942-1125**
Lake County 911 Department **2293 North Main Street, A309, Crown Point, IN 46307**	**(219) 755-3034**
Lake County Sheriff Department **2600 West 93rd Ave.. Crown Point, IN 46307**	**911 or 219-755-3400**
Indiana State Police **1550 East 181 Ave. Lowell, IN 46356**	**911 or 219-696-6242**
Lake County Dispatch	**219-755-3333**
Hobart Fire Department **401 E. 10th St. Hobart, IN 46342**	**911 or 219-942-5184**
Lake County Homeland Security and Emergency Management Agency **2900 W. 93rd Ave., Crown Point, IN 46307**	**219-755-3549**
DNR Law Enforcement District 10 Headquarters (C.O.) **100 West Water Street, Michigan City, IN 46360**	**(219) 879-5710**
St. Mary's Medical Health Center **1500 South Lake Park Ave., Hobart, IN 46342**	**219-942-0551**
Hind General Hospital **101 W. 61st Ave., Hobart, IN 46342**	**219-942-2760**
Poison Control	**800-382-9097**
IN Dept. of Environmental Management - Spill Line	**888-233-7745**
CHEMTREC (Chemical Transportation Emergency Center)	**800-424-9300**
National Response Center (if spill occurs on a highway)	**800-424-8802**
Lake County Health Department **2900 West 93rd Avenue, Crown Point, IN 46307**	**219-755-3655**
Lake Co. Purdue Extension **880 E. 99th Ct., Crown Point, IN 46307**	**219-755-3240**
Mayor of Hobart – Brian Snedcor **414 Main St.,Hobart, IN 46342**	**219-942-6112**
Gary Airport **6001 Industrial Hwy, Gary, IN**	**219-949-9722**
Hobart Sky Ranch Airport	**219-942-3020**
FAA - Accident Report Desplaines, IL	**847-294-7294**

EMERGENCY TELEPHONE NUMBERS
2015 COOPERATIVE GYPSY MOTH PROJECT

Lake/Porter Counties

SITE (Treatment Method):	Portage 1 (Mating Disruption)
Gary Police Department 555 Polk Street	911 or 219-881-1201
Lake County Sheriff Department 2600 West 93rd Ave.. Crown Point, IN 46307	911 or 219-755-3400
Indiana State Police 1550 East 181 Ave. Lowell, IN 46356	911 or 219-696-6242
Gary Fire Department 200 East 5th Avenue, Gary, IN 46402-1309	911 or 219-881-4779
Lake County Homeland Security and Emergency Management Agency 2900 W. 93rd Ave., Crown Point, IN 46307	219-755-3549
DNR Law Enforcement District 10 Headquarter (C.O.) 100 West Water Street, Michigan City, IN 46360	(219) 879-5710
Methodist Hospital 600 Grant Street, IN	219-886-4000
Poison Control	800-382-9097
IN Dept. of Environmental Management - Spill Line	888-233-7745
CHEMTREC (Chemical Transportation Emergency Center)	800-424-9300
National Response Center (if spill occurs on a highway)	800-424-8802
Lake County Health Department 2900 West 93rd Avenue, Crown Point, IN 46307	219-755-3655
Lake Co. Purdue Extension 880 E. 99th Ct., Crown Point, IN 46307	219-755-3240
Mayor of Gary- Karen Freeman-Wilson 401 Broadway, Suite 203, Gary, IN 46402	(219) 881-4815
Gary Regional Airport 6001 Industrial Hwy, Gary, IN	219-949-9722
FAA - Accident Report Desplaines, IL	847-294-7294
Gary Health Department 1145 West 5th Avenue, Gary, Indiana 46402	219.882.5565

EMERGENCY TELEPHONE NUMBERS
2015 COOPERATIVE GYPSY MOTH PROJECT

Porter County

SITE (Treatment Method):	Palmer 1 (Mating Disruption) Palmer 2 (Mating Dispruption)
Porter County Sheriff Department **2755 St. Rd 49, Valparaiso, IN 46383**	**911 or 219-477-3000**
Indiana State Police- Lowell District **1550 East 181 Ave. Lowell, IN 46356**	**911 or 219-696-6242**
Valparaiso Fire Department **2605 Cumberland Dr., Valparaiso, IN 46383**	**911 or 219-462-8325**
Union Township Fire-Rescue **551 W State RD 130Wheeler, IN 46393**	**911 or 759-3321**
Porter County Emergency Response and Preparedness **155 Indiana Ave.Suite 104Valparaiso, IN 46383-5548**	**219-465-7591**
DNR Law Enforcement District 10 Headquarters (C.O.) **100 West Water Street, Michigan City, IN 46360**	**(219) 879-5710**
Porter Memorial Hospital **85 E. Hwy 6, Valparaiso, IN 46383**	**219-462-0063**
Poison Control	**800-382-9097**
IN Dept. of Environmental Management - Spill Line	**888-233-7745**
CHEMTREC (Chemical Transportation Emergency Center)	**800-424-9300**
National Response Center (if spill occurs on a highway)	**800-424-8802**
Porter County Health Department **155 Indiana Ave.Suite 104Valparaiso, IN 46383**	**219-465-3525**
Porter Co. Purdue Extension **155 Indiana Ave, Suite 301, Valparaiso, IN 46383**	**219-462-1161**
Porter County Regional Airport **4207 Murvihill Road, Valparaiso, IN 46383**	**219-462-6508**

EMERGENCY TELEPHONE NUMBERS
2015 COOPERATIVE GYPSY MOTH PROJECT

Porter County

SITE (Treatment Method):	Valparaiso12 (Mating Disruption)
Valparaiso Police Department 355 S. Washington St., Valparaiso, IN, 48383	911 or 219-462-2135
Porter County Sheriff Department 2755 St. Rd 49, Valparaiso, IN 46383	911 or 219-477-3000
Indiana State Police- Lowell District 1550 East 181 Ave. Lowell, IN 46356	911 or 219-696-6242
Valparaiso Fire Department 2605 Cumberland Dr., Valparaiso, IN 46383	911 or 219-462-8325
Porter County Emergency Response and Preparedness 155 Indiana Ave.Suite 104Valparaiso, IN 46383-5548	219-465-7591
DNR Law Enforcement District 10 Headquarters (C.O) 100 West Water Street, Michigan City, IN 46360	(219) 879-5710
Porter Memorial Hospital 85 E. Hwy 6, Valparaiso, IN 46383	219-462-0063
Poison Control	800-382-9097
IN Dept. of Environmental Management - Spill Line	888-233-7745
CHEMTREC (Chemical Transportation Emergency Center)	800-424-9300
National Response Center (if spill occurs on a highway)	800-424-8802
Porter County Health Department 155 Indiana Ave.Suite 104Valparaiso, IN 46383	219-465-3525
Porter Co. Purdue Extension 155 Indiana Ave, Suite 301, Valparaiso, IN 46383	219-465-3555
Mayor of Valparaiso- Jon Costas Mayors Executive Assistant- Lori Good 166 Lincolnway, Valparaiso, IN 46383	219-462-1161
Porter County Regional Airport 4207 Murvihill Road, Valparaiso, IN 46383	219-462-6508
FAA - Accident Report Desplaines, IL	847-294-7294

EMERGENCY TELEPHONE NUMBERS
2015 COOPERATIVE GYPSY MOTH PROJECT

Porter County

SITE (Treatment Method):	Chesterton (Mating Disruption)
Chesterton Police Department 790 Broadway, Chesterton, IN 46304	911 or 219-926-1136
Porter County Sheriff Department 2755 St. Rd 49, Valparaiso, IN 46383	911 or 219-477-3000
Indiana State Police 1550 East 181 Ave. Lowell, IN 46356	911 or 219-696-6242
Chesterton Fire Department 702 Broadway, Chesterton, IN 46304	911 or 219-926-7162
Westchester Township Fire Department 100 W. Indiana Ave., Chesterton, IN 46304	911 or 219-926-1405
Porter County Emergency Response and Preparedness 155 Indiana Ave.Suite 104Valparaiso, IN 46383-5548	219-465-7591
DNR Law Enforcement District 10 Headquarters (C.O.) 100 West Water Street, Michigan City, IN 46360	219- 879-5710
Porter Memorial Hospital 85 E. Hwy 6, Valparaiso, IN 46383	219-462-0063
Poison Control	800-382-9097
IN Dept. of Environmental Management - Spill Line	888-233-7745
CHEMTREC (Chemical Transportation Emergency Center)	800-424-9300
National Response Center (if spill occurs on a highway)	800-424-8802
Porter County Health Department 155 Indiana Ave.Suite 104Valparaiso, IN 46383	219-465-3525
Porter Co. Purdue Extension 155 Indiana Ave, Suite 301, Valparaiso, IN 46383	219-465-3555
Chesterton Town Manager- C. Bernard Doyle ,1490 Broadway Chesterton, IN 46304	219-926-1098
Porter County Regional Airport 4207 Murvihill Road, Valparaiso, IN 46383	219-462-6508
FAA - Accident Report Desplaines, IL	847-294-7294

EMERGENCY TELEPHONE NUMBERS
2015 COOPERATIVE GYPSY MOTH PROJECT

St. Joseph County

SITE (Treatment Method):	Potato Creek 1/2 (Btk/MD Blocks)
St. Joseph County Sheriff Department – Mike Grzegorek, 401 W Sample St, South Bend	**911 or 574-245-6540** **574-235-9611 (Dispatch)**
State Police – Bremen District Lt. Chad Larsh, 1425 Miami Trail, Bremen	**911 or 574-546-4900** **800-552-2959**
North Liberty Police Department Mike Sawdon, 116 N Main St. North Liberty	**911 or 574-656-4411**
Lakeville Police Department Patrick Howard, 209 S Michigan St, Lakeville	**911 or 574-784-2024** **574-235-9611 (Dispatch)**
Centre Township Fire Department 19971 Kern Road, South Bend	**911 or 574-291-1677**
Liberty Township Volunteer Fire Department 112 S State St, North Liberty	**911 or 574-656-3163**
Lakeville/Union Township Volunteer Fire Department 117 S Main Street, Lakeville	**911 or 574-784-2698**
County Emergency Management Agency 4714 Lathrop Street, South Bend	**574-235-9234**
Law Enforcement District 1 Headquarters (C.O.) 9822 N Turkey Creek Rd Syracuse, IN 46567	**574-457-8092**
911 Dispatch Center South Bend Police Department	**574-235-9361**
Hospital: **Memorial Hospital** 615 N Michigan St., South Bend **St. Joe Regional Med Center** 1915 Lake Ave., Plymouth **St. Joseph Regional Med Center** 5215 Holy Cross Parkway, Mishawaka	**574-647-1000** **574-948-4000** **574-335-5000**
Poison Control	**800-382-9097**
Dept. of Environmental Management - Spill Line	**888-233-7745**
CHEMTREC (Chemical Transportation Emergency Center)	**800-424-9300**
National Response Center (if spill occurs on a highway)	**800-424-8802**
St. Joseph County Health Department Nick Molchan, 227 W Jefferson Blvd, South Bend	**574-235-9750**
Extension Educator – Phil Sutton 125 S Lafayette Blvd, 2nd Floor, South Bend	**574-235-9604**

St. Joseph County Commissioners Andrew Kostielney, Dave Thomas, & Deborah Fleming	**574-235-9534**
FAA - South Bend FSDO 5800 Nimtz Parkway, South Bend	**574 245 4600**
Nearest Airport: South Bend International, 4477 Progress Drive Plymouth Municipal Airport, 301 Airport Drive, Plymouth	 **574-233-2185** **574-935-5152**
Potato Creek State Park James Webb, 25601 State Road 4, North Liberty	**574-656-8186**